

CLAIMS

What is claimed is:

- 1 1. A video distribution network, comprising:
2 a video server; and
3 a video client operatively coupled to said server and receives video packets from the server,
4 said video client including a video buffer in which said video packets received from
5 the server are stored and whose capacity can be dynamically adjusted.
- 1 2. The video distribution network of claim 1 wherein the capacity of said video buffer can be
2 dynamically increased.
- 1 3. The video distribution network of claim 1 wherein the capacity of said video buffer can be
2 dynamically decreased.
- 1 4. The video distribution system of claim 1 wherein said client includes memory and said
2 video buffer comprises a portion of said memory.
- 1 5. The video distribution system of claim 4 wherein the capacity of said video buffer can be
2 dynamically increased by allocating more of said memory for use by the video buffer.
- 1 6. The video distribution system of claim 4 wherein the capacity of said video buffer can be
2 dynamically decreased by de-allocating a portion of said video buffer.

1 7. The video distribution system of claim 1 wherein said server and said client are operatively
2 coupled together via a wireless transmission link.

1 8. The video distribution system of claim 1 wherein said client monitors the amount of
2 unplayed video packets stored in said video buffer and based on the amount of unplayed video
3 packets, increases the capacity of said video buffer.

1 9. The video distribution system of claim 8 wherein said client monitors the amount of
2 unplayed video packets stored in said video buffer to determine if said the amount of unplayed
3 video packets falls below a threshold A, B times in period of C seconds, where A indicates a
4 portion of the capacity of the buffer, B is an integer greater than 0, and C is greater than 0.

1 10. The video distribution system of claim 8 wherein said client monitors the amount of
2 unplayed video packets stored in said video buffer to determine if said the amount of unplayed
3 video packets falls below a threshold A, where A indicates a portion of the capacity of the buffer.

1 11. The video distribution system of claim 1 wherein said client monitors the amount of
2 unplayed video packets stored in said video buffer and based on the amount of unplayed video
3 packets, decreases the capacity of said video buffer.

1 12. The video distribution system of claim 11 wherein said client monitors the amount of
2 unplayed video packets stored in said video buffer to determine if the amount of unplayed video
3 packets falls below a threshold D over E period of time, where D indicates a portion of the capacity

4 of the buffer and E indicates a time period, and the amount of unplayed video packets does not fall
5 below threshold D over E period of time, then the client reduces the capacity of said video buffer.

1 13. The video distribution system of claim 1 wherein said client transmits a test data packet to
2 said server which returns the test data packet back to said client and said client determines the size
3 of said video buffer based on the round trip time that the test data packet took to go from the client
4 to the server and back to the client.

1 14. The video distribution system of claim 13 wherein, while receiving video packets from said
2 server, said client transmits a test data packet to said server which returns the test data packet back
3 to said client and said client adjusts the size of said video buffer based on the round trip time that
4 the test data packet took to go from the client to the server and back to the client.

1 15. A client which received multimedia data, comprising:
2 a processor;
3 a system memory coupled to said processor; and
4 a communication unit coupled to said processor and said system memory, said
5 communication unit receives the multimedia data;
6 wherein said processor allocates a portion of system memory as a buffer to receive the
7 multimedia data, said buffer having a capacity that can be changed while the client
8 receives the multimedia data.

1 16. The client of claim 15 wherein the capacity of said buffer can be dynamically increased.

1 17. The client of claim 15 wherein the capacity of said buffer can be dynamically decreased.

1 18. The client of claim 15 wherein said processor allocates a portion of said system memory
2 before receiving multimedia data into said buffer.

1 19. The client of claim 15 wherein the capacity of said video buffer can be dynamically
2 increased by allocating more of said memory for use by the buffer.

1 20. The client of claim 15 wherein the capacity of said video buffer can be dynamically
2 decreased by de-allocating a portion of said buffer.

1 21. The client of claim 15 wherein said client receives said multimedia data via wireless
2 communication.

1 22. The client of claim 15 wherein said client monitors the amount of unplayed multimedia
2 data stored in said buffer and based on the amount of unplayed multimedia data, increases the
3 capacity of said buffer.

1 23. The client of claim 22 wherein said processor monitors the amount of unplayed multimedia
2 data stored in said buffer to determine if said the amount of unplayed multimedia data falls below a
3 threshold A B times in period of C seconds, where A indicates a portion of the capacity of the
4 buffer, B is an integer greater than 0, and C is greater than 0.

1 24. The client of claim 22 wherein said client monitors the amount of unplayed multimedia
2 data stored in said buffer to determine if said the amount of unplayed multimedia data falls below a
3 threshold A, where A indicates a portion of the capacity of the buffer.

1 25. The client of claim 15 wherein said client monitors the amount of unplayed multimedia
2 data stored in said buffer and based on the amount of unplayed multimedia data, decreases the
3 capacity of said buffer.

1 26. The client of claim 25 wherein said client monitors the amount of unplayed multimedia
2 data stored in said buffer to determine if the amount of unplayed multimedia data falls below a
3 threshold D over E period of time, where D indicates a portion of the capacity of the buffer and E
4 indicates a time period, and the amount of unplayed multimedia data does not fall below threshold
5 D over E period of time, then the client reduces the capacity of said buffer.

1 27. The client of claim 15 wherein said client receives said multimedia data from a server, and
2 wherein said client transmits a test data packet to said server which returns the test data packet
3 back to said client and said processor determines the size of said buffer based on the round trip
4 time that the test data packet took to go from the client to the server and back to the client.

1 28. The client of claim 27 wherein, while receiving video packets from said server, said client
2 transmits a test data packet to said server which returns the test data packet back to said client and

3 said processor adjusts the size of said buffer based on the round trip time that the test data packet
4 took to go from the client to the server and back to the client.

1 29. A method for streaming video from a server to a client across a network, comprising:
2 (a) sending a test packet across the network from the client to the server;
3 (b) receiving the test packet from the server back to the client;
4 (c) measuring the amount of time the test packet took to travel from the client to the server
5 and back to the client;
6 (d) allocating a portion of memory to be a video buffer based on the time measure in (c);
7 (e) receiving video packets from the server; and
8 (f) storing said video packets in said video buffer.

1 30. The method of claim 29 further including retrieving said video packets from said video
2 buffer and playing said packets on a monitor.

1 31. The method of claim 29 further including dynamically changing the size of said video
2 buffer after said client has performed (d) and has begun receiving video packets from said server.

1 32. The method of claim 31 wherein dynamically changing the size of said video buffer
2 includes allocating more memory to make the size larger.

1 33. The method of claim 31 wherein dynamically changing the size of said video buffer
2 includes making the size of the video buffer smaller.